

IN THE CLAIMS

Please cancel Claims 1-15, and Amend the remaining Claims in accordance with the following mark-up copy:

16. (Original) A method for manufacturing an integrated circuit substrate, comprising:

forming a conductive circuit pattern on a first side of a dielectric layer, wherein the conductive circuit pattern includes a plurality of connection attachment terminals; and
laser-drilling a plurality of perforations from one side of the dielectric layer through to the conductive circuit pattern to expose the connection attachment terminals.

17. (Original) The method of Claim 16, wherein the laser-drilling drills the perforations through a second side of the dielectric layer to expose a bottom side of the conductive circuit pattern.

18. (Original) The method of Claim 17, further comprising prior to the laser-drilling, dip plating the integrated circuit substrate, to plate the exposed conductive circuit pattern, whereby the terminals exposed by the laser drilling remain unplated.

19. (Original) The method of Claim 18, further comprising applying an organic solderable protectant to the exposed terminals.

20. (Original) The method of Claim 16, further comprising:
applying a conformal coating over the conductive circuit pattern; and

curing the conformal coating, and wherein the laser drilling exposes the connection attachment terminals after the curing.

21. (New) A method for manufacturing an integrated circuit substrate, comprising:

applying a conformal coating over a conductive circuit pattern disposed at the surface of a dielectric layer of the substrate;

laser-ablating the conformal coating only above terminal areas of the conductive circuit pattern, whereby only the terminal areas are exposed; and

electro-less plating the substrate, whereby the conformal coating prevents plating any of the conductive circuit pattern except for the terminal areas.

22. (New) The method of Claim 21, further comprising:

prior to the applying, first laser-ablating features within the dielectric layer from the surface of the dielectric layer; and

filling the features with metal, whereby conductive features are formed within the dielectric layer.

23. (New) The method of Claim 22, wherein the first laser-ablating laser drills through the dielectric layer to form a via hole, whereby a via is formed by the filling.

24. (New) The method of Claim 23, further comprising prior to the applying, attaching the dielectric layer to a metal layer, and wherein the first laser-ablating drills through the dielectric layer to form a blind via hole terminating at the metal layer, whereby an electrical connection to the metal layer is formed by the filling.

25. (New) The method of Claim 23, further comprising prior to the applying, attaching the dielectric layer to a metal layer, and wherein the first laser-ablating drills through the dielectric layer and the metal layer to form a through via hole

passing through at the metal layer, whereby an electrical connection to an opposite side of the metal layer is provided by the filling.

26. (New) The method of Claim 22, wherein the first laser-ablating forms channels within the dielectric layer, the channels extending from the surface of the dielectric layer to a channel bottom above an opposite surface of the dielectric layer, whereby a conductive pattern is formed by the filling.

27. (New) The method of Claim 21, further comprising prior to the applying, attaching the dielectric layer to a first surface of a metal layer by laminating the dielectric layer onto the metal layer with an adhesive.

28. (New) The method of Claim 27, further comprising prior to the applying, laminating a second dielectric layer to a second surface of the metal layer.

29. (New) The method of Claim 28, further comprising prior to the applying:

first laser-ablating, features within the dielectric layer from outer surfaces of both dielectric layers; and

filling the features with metal, whereby conductive features are formed within each of the dielectric layers.

30. (New) The method of Claim 21, further comprising:

prior to the applying, injection-molding a dielectric material around the metal layer;

first laser-ablating the injection-molded dielectric material to form features on both sides of the dielectric material and within the dielectric material; and

filling the features with conductive material, whereby conductive patterns are formed on both sides of the substrate.

31. (New) A method for manufacturing an integrated circuit substrate, comprising:

forming a conductive circuit pattern on a first side of a dielectric layer, wherein the conductive circuit pattern includes a plurality of connection attachment terminals;

laser-drilling a plurality of perforations from a second side of the dielectric layer through to a bottom side of the conductive circuit pattern to expose the connection attachment terminals.

32. (New) The method of Claim 31, further comprising prior to the laser-drilling, dip-plating the conductive pattern, whereby the laser-drilling exposes unplated connection attachment.

33. (New) The method of Claim 32, further comprising punching only tool sprocket holes through the dielectric layer prior to the forming, whereby any portion of the conductive circuit pattern in contact with terminal vias of the substrate are not plated by the dip-plating.

34. (New) The method of Claim 31, further comprising prior to the forming, laminating a conductive layer to the first side of the dielectric layer, and wherein the forming is performed by photo-etching the conductive pattern from the conductive layer.

35. (New) The method of Claim 34, further comprising prior to the forming, plating the conductive layer to form a protective metal plating layer over the conductive pattern, and wherein the laser-drilling is performed subsequent to the plating, whereby the connection attachment terminals remain unplated.